SHARP Service Manual

MODEL
RD-717

SPECIFICATIONS

Type	3-motor auto reverse system stereo tape deck
Tape Speed	19cm/sec (7-1/2ips), 9.5cm/sec (3-3/4ips), 4.8cm/sec (1-7/8 ips)
Reel Size	18cm (7") maximum
Frequency Response	25 – 18,000 Hz at 19cm/sec 25 – 12,000 Hz at 9.5cm/sec 30 – 6,000 Hz at 4.8cm/sec
Record/Playback Time	Stereo 1 hour (19cm/sec) Monaural 2 hours (19cm/sec)
Fast Forward Time	1 minute
Fast Backward Time	1 minute
Power Source	AC 110/200/220/240V, 50/60 Hz
Power Consumption	125 watts
Input Circuits	Microphone Inputs, 10K ohm IMP Line Inputs, 470K ohm IMP
Output Circuits	Line Outputs, 50K ohm IMP Stereo headphone, 8 ohm IMP
Integrated Input Output Circuit	5-pin DIN Socket
Wow & Flutter	0.07% W.R.M.S. (19cm/sec) 0.10% W.R.M.S. (9.5cm/sec) 0.20% W.R.M.S. (4.8cm/sec)
S/N Ratio	53 dB
Recording System	AC bias system
Erasing System	AC erasing
Dimensions	429mm(W) x 153mm(D) x 488mm(H) (17" x 6" x 19-3/16")
Weight	20kg (44 lbs.)

SHARP CORPORATION OSAKA, JAPAN

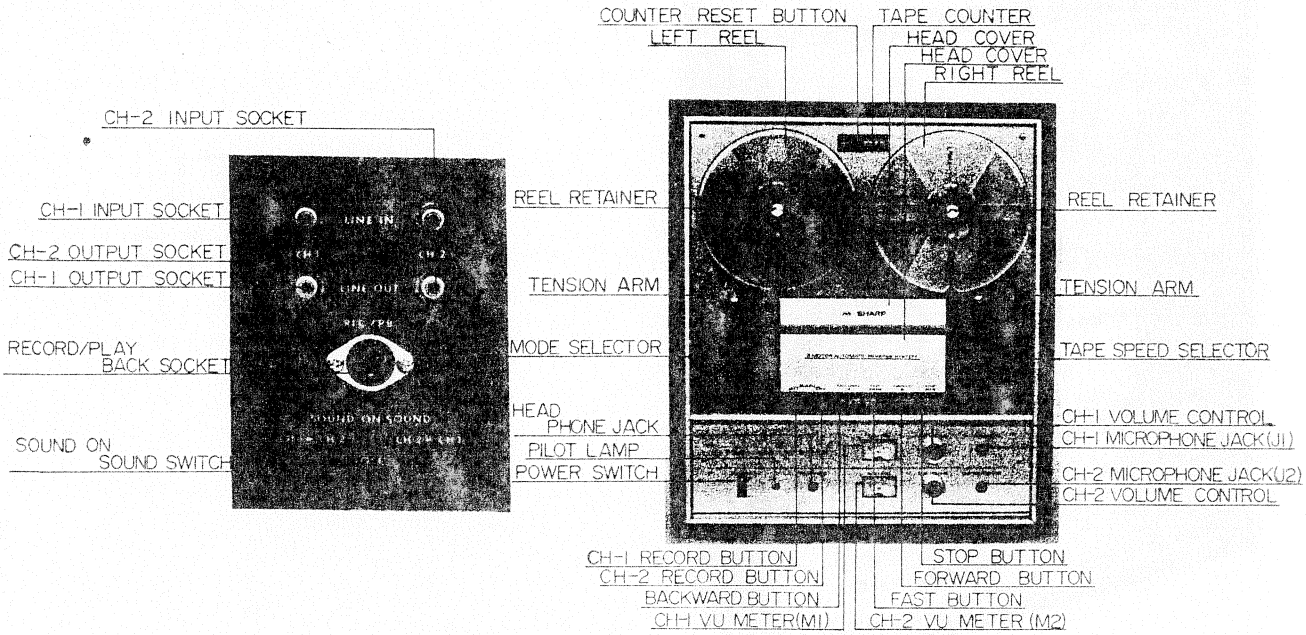

Figure 1

CABINET DISASSEMBLY

1. Remove the VOLUME control knobs (3).
2. Remove the MODE SELECTOR and SPEED SELECTOR knobs (4).
3. Remove the screws (5) retaining the TENSION ARMS.
4. Remove the HEAD COVERS (2).
5. Remove the 6 screws (6) retaining the FRONT PANEL.
6. Slightly lift up and remove the PANEL (1).
7. Place the recorder in a vertical position and remove the 4 MECHANISM CHASSIS retaining screws (7) located on the back of the cabinet.
8. Place the recorder in a horizontal position and remove the 2 MECHANISM CHASSIS retaining screws (8) on the bottom of the cabinet.

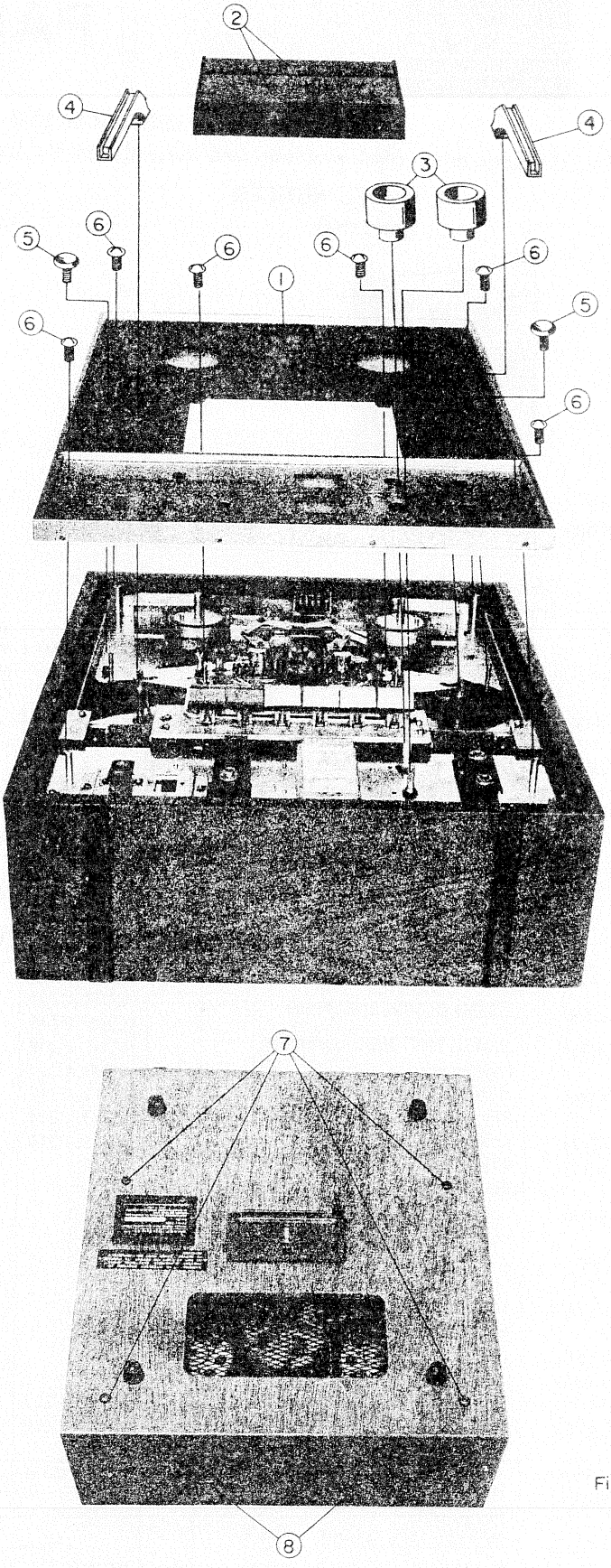

Figure 2

MODEL
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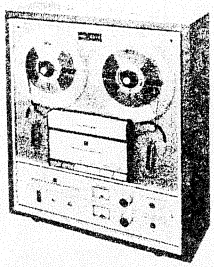
SHARP

PARTS LIST

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following informations.

1. MODEL NUMBER
2. REF. NO.
3. PART NO.
4. DESCRIPTION



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CAPACITORS

REF. NO.	PART NO.	DESCRIPTION
C1, C2	S-5-277J	270PF, 50V, 5%, Styrene
C3, C4	D-5-477K	470PF, 50V, 10%, Discap
C5, C6	CU1.6-102Q	10MFD, 16V, +100%, −10%, Electrolytic
C7, C8	AD-1-304M	.3MFD, 10V, 20%, Aluminum Electrolytic
C9, C10	D-5-227K	220PF, 50V, 10%, Discap
C11, C12	CU1.6-102Q	10MFD, 16V, +100%, −10%, Electrolytic
C13, C14	CU-06-101Q	100MFD, 6.3V, +100%, −10%, Electrolytic
C15, C16	CU2.5-472Q	47MFD, 25V, +100%, −10%, Electrolytic
C17, C18	S-5-336J	3300PF, 50V, 5%, Styrene
C19, C20, C21, C22	AD-06-104M	.1MFD, 6V, 20%, Aluminum Electrolytic
C23, C24, C25, C26	ML-5-335K	.033MFD, 50V, 10%, Mylar
C27, C28	AD-1-204M	.2MFD, 10V, 20%, Aluminum Electrolytic
C29, C30	AD-1-474M	.47MFD, 10V, 20%, Aluminum Electrolytic
C31, C32	ML-5-476M	.0047MFD, 50V, 20%, Mylar
C33, C34	CU2.5-472Q	47MFD, 25V, +100%, −10%, Electrolytic
C35, C36	AD-1-304M	.3MFD, 10V, 20%, Aluminum Electrolytic
C37, C38	D-5-227K	220PF, 50V, 10%, Discap
C39, C40	ML-5-475M	.047MFD, 50V, 20%, Mylar
C41, C42	CU1.6-102Q	10MFD, 16V, +100%, −10%, Electrolytic
C43, C44	ML-5-395K	.039MFD, 50V, 10%, Mylar
C45, C46	AD-06-104M	.1MFD 6V, 20%, Aluminum Electrolytic
C47, C48	CU2.5-473R	4.7MFD, 25V, +150%, −10%, Electrolytic
C49, C50	ML-5-335K	.033MFD, 50V, 10%, Mylar
C51, C52	CU2.5-102Q	10MFD, 25V, +100%, −10%, Electrolytic
C53, C54	CU2.5-221Q	220MFD, 25V, +100%, −10%, Electrolytic
C55, C56	CU2.5-473R	4.7MFD, 25V, +150%, −10%, Electrolytic
C57, C58	D-5-337K	330PF, 50V, 10%, Discap
C59, C60	CU2.5-102Q	10MFD, 25V, +100%, −10%, Electrolytic
C61, C62	CU-1-332Q	33MFD, 10V, +100%, −10%, Electrolytic
C101	ML-5-105M	.01MFD, 50V, 20%, Mylar
C102, C103	ML-5-155M	.015MFD, 50V, 20%, Mylar
C104	ML-5-475M	.047MFD, 50V, 20%, Mylar
C105	CU2.5-471Q	470MFD, 25V, +100%, −10%, Electrolytic
C106	CU2.5-221Q	220MFD, 25V, +100%, −10%, Electrolytic
C107	CU3.5-221Q	220MFD, 35V, +100%, −10%, Electrolytic
C108	CU2.5-471Q	470MFD, 25V, +100%, −10%, Electrolytic
C121-A, C121-B	TO-854	Trimmer
C122-A, C122-B	TO-854	Trimmer
C201, C202, C203, C204, C205, C206, C207, C208, C209, C210, C211, C212, C213, C214, C215, C216	OL-40-104M	.1MFD, 400V, 20%, Oil
C217	CU-5-102Q	10MFD, 50V, +100%, −10%, Electrolytic
C221-1 C221-2	MP30-W403K	4MFD, 300V, 10%, Metallized
C222-1 C222-2	MP30-W153K	1.5MFD, 300V, 10%, Metallized
C223-1 C223-2	25L-200	100MFD + 100MFD, 250V, Electrolytic
C224	OL-40-475M	.047MFD, 400V, 20%, Oil
C225	OL-40-105M	.01MFD, 400V, 20%, Oil
C226, C227	OL-40-475M	0.47MFD, 400V, 20%, Oil
C228, C229	CT3.5-471R	470MFD, 35V, +150%, −10%, Electrolytic
C230, C231	D-5-477K	470PF, 50V, 10%, Discap

RESISTORS

(Unless otherwise specified resistors are 1/4W, 10%, Carbon.)

R1, R2	1/4SA2.2KK	2.2K ohm
R3, R4	1/4SA470KK	470K ohm
R5, R6	1/4SA-10KK	10K ohm
R7, R8	1/4SA-100K	100 ohm
R9, R10	1/4SA-390K	390 ohm

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PARTS LIST

REF. NO.	PART NO.	DESCRIPTION		
R11, R12	1/4SA-10KK	10K ohm		
R13, R14	1/4SA-18KK	18K ohm		
R15, R16	1/4SU-100KK	100K ohm		
R17, R18	1/4SA-56KK	56K ohm		
R19, R20	1/4SU-10KK	10K ohm		
R21, R22	1/4SU-1KK	1K ohm		
R23, R24	1/4SU-22KK	22K ohm		
R25, R26	1/4SU-1KK	1K ohm		
R27, R28	1/4SA4.7KK	4.7K ohm		
R29, R30	1/4SA-68KK	68K ohm		
R31, R32	1/4SA-18KK	18K ohm		
R33, R34	1/4SA-56KK	56K ohm		
R35, R36	1/4SA3.9KK	3.9K ohm		
R37, R38	1/4SA100KK	100K ohm		
R39, R40	1/4SA-1.5KK	1.5K ohm		
R41, R42	1/4SA3.3KK	3.3K ohm		
R43, R44	1/4SU150KK	150K ohm		
R45, R46	1/4SU220KK	220K ohm		
R47, R48	1/4SA-100K	100 ohm		
R49, R50	1/4SA-220K	220 ohm		
R51, R52	1/4SA-18KK	18K ohm		
R53, R54	1/4SA2.2KK	2.2K ohm		
R55, R56	1/4SA3.3KK	3.3K ohm		
R57, R58	1/4SU270KK	270K ohm		
R59, R60	1/4SA-18KK	18K ohm		
R61, R62	1/4SA-100K	100 ohm		
R63, R64	1/4SA4.7KK	4.7K ohm		
R65, R66	1/4SU-82KK	82K ohm		
R67, R68	1/4SA3.3KK	3.3K ohm		
R69, R70	1/4SU-33KK	33K ohm		
R71, R72	1/4SU-33K	33 ohm		
R73, R74	1/4SU1.8KK	1.8K ohm		
R75, R76	1/4SA-1KK	1K ohm		
R77, R78	1/4SA-4.7KK	4.7K ohm		
R79, R80	1/4SA-1KK	1K ohm		
R81, R82	1/4SU100KK	100K ohm		
R83, R84	1/4SU-1KK	1K ohm		
R85, R86	1/4SA-47K	47 ohm		
R87, R88, R89, R90	1/4SA2.7KK	2.7K ohm		
R91, R92	1/4SA-8.2K	8.2 ohm		
R101, R102	1/4SA1.2KK	1.2K ohm		
R103	1/2LL-1K	1 ohm, 1/2W, 10%, Resin		
R104	1/2M-5.6K	5.6 ohm, 1/2W, 10%, Carbon		
R105, R106	1/4SA-1KK	1K ohm		
R107	1/2M-100K	100 ohm, 1/2W, 10%, Carbon		
R108	1/2M-1.8KK	1.8K ohm, 1/2W, 10%, Carbon		
R109	1/2M-22K	22 ohm, 1/2W, 10%, Carbon		
R110	2LL-30K	30 ohm, 2W, 10%, Resin		
R111	1/2M-3.3KK	3.3K ohm, 1/2W, 10%, Carbon		
R112	2LL-30K	30 ohm, 2W, 10%, Resin		
R121, R122	8V-569	5K ohm, Volume Control		
R123, R124	8V-618	10K ohm, Semi-Variable		
R125, R126	8V-618	10K ohm, Semi-Variable		
R127, R128	8V-618	10K ohm, Semi-Variable		
R129, R130	8V-618	10K ohm, Semi-Variable		
R201, R202, R203, R204, R205, R206, R207, R208, R209, R210, R211, R212, R213, R214, R215, R216,	1/2M-100K	100 ohm, 1/2W, 10%, Carbon		

REF. NO.	PART NO.	DESCRIPTION		
R217				
R218, R219	1/4SA4.7KK	4.7K ohm		
R221, R222	30LT-450K	450 ohm, 30W, 10%, Resin		
R223	10LL-30K	30 ohm, 10W, 10%, Resin		
R224	5LL-8K	8 ohm, 5W, 10%, Resin		
R225	3LL-15K	15 ohm, 3W, 10%, Resin		

COILS, TRANSFORMERS AND SOLENOIDS

L1, L2	4L-937	Coil, Bias Trap		
L3, L4	4L-950	Coil, Bias Trap		
L5, L6	4L-957	Coil, Record Equalizer		
L7	4L-944	Coil, Dummy Load		
L8	4L-362B	Coil, Bias Oscillator		
L9, L10, L11, L12	4L-938	Coil, Hum Cancel		
PM101	XPLUNG-467B	SOLENOID, Pinch Roller Plunger		
PM102, PM103	XPLUNG-467A	SOLENOID, Actuating Plunger		
PM104	XPLUNG-467C	SOLENOID, Channel Select Plunger		
T1, T2	7T-474	Transformer, Headphone Output		
T3	5T-582	Transformer, Power		

SEMICONDUCTORS

Q1, Q2	2SC458LGB	Transistor, 1st Audio Amplifier		
Q3, Q4	2SC458LGC	Transistor, 2nd Audio Amplifier		
Q5, Q6	2SC458B	Transistor, 3rd Audio Amplifier		
Q7, Q8	2SC458B	Transistor, 4th Audio Amplifier		
Q9, Q10	2SC458B	Transistor, Record Output Amplifier		
Q11, Q12	2SC281EPB	Transistor, Meter, Headphone Amplifier		
Q13, Q14	2SC984B	Transistor, Bias Oscillator		
Q15	2SC458C	Transistor, Ripple Filter		
D1, D2, D3, D4	1N34A	Diode, Recording Level		
SR1, SR2	SI-RECT-33	Rectifier, Power		
SR3	SI-RECT-27	Rectifier, Relay		
SR4	SI-RECT-27	Rectifier, Relay		

SWITCHES

SW1, SW2	4S-81	Record/Playback		
SW3	5S-05	Reverse		
SW4	5S-07	Sound on Sound		
SW5	3S-15	Equalizer		
SW6	8S-75	Muting		
SW7	3S-17	Mode Selector		
SW8	0S-33	Bias		
SW9	8S-73	Power		
SW101	8S-79	Push Button (4 Series)		
SW102	8S-85	Shut-off		
SW103	8S-87	Sensing Pole, Left		
SW104	8S-89	Sensing Pole, Right		

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PARTS LIST

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REF. NO.	PART NO.	DESCRIPTION		

MISCELLANEOUS

J1, J2	J-903	Jack, Microphone		
J3	J-941	Jack, Headphone		
PL-1, PL-2, PL-3	PL-504	Lamp, Pilot, 8V		
M1, M2	METER-759	Meter, Recording Level Indicator		
P1, P2	PG-413	Plug, Level Meter (9 Pins)		
P3, P4	PG-413	Plug, Level Meter (9 Pins)		
P5, P6	PG-437	Plug, Level Meter (7 Pins)		
P7	PG-122	Plug, (5 Pins)		
SO1, SO2	SO-189	Socket, Level Meter (9 Pins)		
SO3, SO4	SO-189	Socket, Level Meter (9 Pins)		
SO5, SO6	SO-187	Socket, Level Meter (7 Pins)		
SO7	SO-910	Socket, Power (5 Pins)		
SO8	SO-985	Socket, Voltage Selector		
SO9A, SO9B SO10A, SO10B	SO-923	Socket, Pin Jack		
SO11	SO-971	Socket, DIN Connector		
RL101, RL102, RL103, RL104	RELAY-467	Relay		
	X2CAB-3071	Cabinet Assembly Complete		
	PANEL-3071	Panel, Reel Deck, Metal		
	H-COV467A	Cover, Head, Top		
	H-COV467B	Cover, Head, Bottom		
	CO-WAKU581	Counter Window, Plastic		
	8K-238	Knob, Mode Selector and Speed Selector		
	8K-240	Knob, Volume		
	REEL-CAP	Retainer, Reel		
	IND-P467B	Plate, Head Cover, Top		
	IND-P3071C	Plate, Head Cover, Bottom		
	IND-P3071A	Plate, Control		
	IND-P3071D	Plate, Jack		
	IND-P3075	Plate, Model Names		
	DEC-M467G	Screw, Tension Arm		
	FELT-911C	Felt, Power Switch		
	X6AMP-C467	Chassis, Amplifier		
	XVR-ANG3071	Bracket, Volume		
	XJ-ANG467B	Bracket, Jack Mounting, Right		
	J-ANG467C	Bracket, Microphone Jack		
	XPCB-A467A	Bracket, P.C.B. Relay, Left		
	XPCB-A467B	Bracket, P. C.B. Relay, Right		
	XSWANG467A	Bracket, Power Switch Mounting		
	METER-DAI	Cushion, Level Meter		
	XMOTOR581L	Motor, Reel Spindle, Left		
	XMOTOR581R	Motor, Reel Spindle, Right		
	XMOTOR581C	Motor, Capstan		
	XCOUNT-581	Counter, Tape		
	HEAD-467AN	Head, Record/Playback		
	HEAD-467B	Head, Erase		
	XB-ASSY467	Assembly, Button		
	ACC-262	Cord, AC		
	ACC-264	Cord, AC		
	ACC-279	Cord, AC		
	ACC-281	Cord, AC		